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can be found at least, for example, in claims 35 and 45 as originally filed and in the specification at: page 8, lines 32-34; page 10, line 6 to page 11, line 19; page 15, line 37 to page 16, line 2; page 18, lines 4-34; and Examples 3-9. *No new matter has been added.*

Amendment and cancellation of the claims were done solely to expedite prosecution of the application. Applicants reserve the right to pursue the claims as originally filed, or similar claims, in this application or one or more separate applications. In particular, claims 1-34 have been cancelled as directed to non-elected subject matter. Nevertheless, Applicants hereby reserve the right to pursue the subject matter of the non-elected claims in one or more divisional applications.

Attached hereto as Appendix A, captioned "MARKED UP VERSION TO SHOW CHANGES MADE" is a marked-up version of the changes made to the claims by the amendments presented herein. For the Examiner's convenience, a set of the claims that will be pending upon entry of the amendments presented herein is also attached hereto as Appendix B.

#### ***Restriction Requirement***

The Examiner has required restriction to one of the following inventions under 35 U.S.C. § 121:

- Group I: Claims 1-22 drawn to a method for encapsidating a poliovirus nucleic acid, classified in class 435, subclass 325, class 435, subclass 235.1, class 435, subclass 5.
- Group II: Claims 23-26, drawn to an encapsidated poliovirus, classified in class 435, subclass 325.
- Group III: Claims 27-34, drawn to an immunogenic composition comprising a recombinant poliovirus expressing an immunogenic protein, classified in class 435, subclass 325, class 435, subclass 69.7, class 435, subclass 71.1.

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Group IV: Claims 35-45, drawn to a method of stimulating the immune system of a subject, classified in class 424, subclass 93.1, class 435, subclass 71.1.

Applicants hereby elect the Group IV invention (claims 35-45; now claims 35-39 and 45-63 after entry of the preliminary amendment canceling claims 40-44 and adding new claims 46-63) for prosecution in this application, *without traverse*.

Applicants reserve the right to traverse the restriction between the non-elected groups in this application or one or more separate applications. Applicants submit that the newly added claims (*i.e.*, claims 46-63) read on the elected invention.

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**SUMMARY**

In view of the foregoing, early examination on the merits and allowance of the application with all pending claims are respectfully requested. If a telephone conversation with Applicants' attorney would expedite the prosecution of the application, the Examiner is urged to call the undersigned at (617) 227-7400.

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

A handwritten signature in cursive script, reading "Peter C. Lauro". The signature is written in dark ink and is positioned above a horizontal line.

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Dated: **August 20, 2002**

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Appendix A

MARKED UP VERSION TO SHOW CHANGES MADE

35. (Amended) A method for ~~stimulating an immune response to an immunogenic~~ delivering a protein or fragment thereof, in to a subject, comprising administering, in a physiologically acceptable carrier, an effective amount of a composition comprising a recombinant poliovirus nucleic acid having a foreign nucleotide sequence encoding, in an expressible form, ~~an immunogenic~~ a protein or fragment thereof substituted for at least a portion of the entire P1 capsid precursor region of the poliovirus genome.

38. (Amended) The method of claim 35 wherein the ~~immunogenic~~ protein or fragment thereof is selected from the group consisting of a secretory protein, a cell surface protein, and a structural protein ~~a human immunodeficiency virus type 1 protein or fragment thereof.~~

39. (Amended) The method of claim 38 wherein the secretory protein is selected from the group consisting of interleukin, cytokine, and factor ~~human immunodeficiency virus type 1 protein or fragment thereof is selected from the group consisting of the gag protein, the pol protein, and the env protein of human immunodeficiency virus type 1.~~

45. (Amended) A method for delivering ~~stimulating an immune response to a foreign~~ a protein, or fragment thereof, in to a subject, comprising the steps of:

- (a) removing host cells from the subject; and
- (b) contacting the host cells with
  - (i) a recombinant poliovirus nucleic acid having a foreign nucleotide sequence substituted for at least a portion of the entire P1 capsid precursor region of the poliovirus genome; and
  - (ii) an expression vector lacking an infectious poliovirus genome, the nucleic acid of which encodes poliovirus P1 capsid precursor protein and directs expression of the P1 capsid precursor protein; and
- (c) maintaining the cultured host cells under conditions appropriate for introduction of the recombinant poliovirus nucleic acid and the expression vector into the

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host cells, thereby generating modified host cells which express a foreign protein or fragment thereof encoded by the foreign nucleotide sequence; and

(d) reintroducing the modified host cells into the subject.

**Appendix B**

35. A method for delivering a protein or fragment thereof, to a subject, comprising administering, in a physiologically acceptable carrier, an effective amount of a composition comprising a recombinant poliovirus nucleic acid having a foreign nucleotide sequence encoding, in an expressible form, a protein or fragment thereof substituted for at least a portion of the P1 capsid precursor region of the poliovirus genome.

36. The method of claim 35 wherein the recombinant poliovirus nucleic acid is encapsidated.

37. The method of claim 35 wherein the composition is administered orally or by intramuscular injections.

38. The method of claim 35 wherein the protein or fragment thereof is selected from the group consisting of a secretory protein, a cell surface protein, and a structural protein.

39. The method of claim 38 wherein the secretory protein is selected from the group consisting of interleukin, cytokine, and factor.

45. A method for delivering a protein, or fragment thereof, to a subject, comprising the steps of:

- (a) removing host cells from the subject; and
- (b) contacting the host cells with
  - (i) a recombinant poliovirus nucleic acid having a foreign nucleotide sequence substituted for at least a portion of the P1 capsid precursor region of the poliovirus genome; and
  - (ii) an expression vector lacking an infectious poliovirus genome, the nucleic acid of which encodes poliovirus P1 capsid precursor protein and directs expression of the P1 capsid precursor protein; and
- (c) maintaining the cultured host cells under conditions appropriate for introduction of the recombinant poliovirus nucleic acid and the expression vector into the

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host cells, thereby generating modified host cells which express a foreign protein or fragment thereof encoded by the foreign nucleotide sequence; and

(d) reintroducing the modified host cells into the subject.

46. The method of claim 45 wherein the recombinant poliovirus nucleic acid is encapsidated.

47. The method of claim 45 wherein the protein or fragment thereof is selected from the group consisting of a secretory protein, a cell surface protein, and a structural protein.

48. The method of claim 47 wherein the secretory protein is selected from the group consisting of interleukin, cytokine, and factor.

49. A method for expressing a foreign gene in a cell comprising:  
contacting the cell, in a physiologically acceptable carrier, with an effective amount of a composition comprising a recombinant poliovirus nucleic acid having a foreign nucleotide sequence encoding, in an expressible form, a gene product substituted for at least a portion of the P1 capsid precursor region of the poliovirus genome,  
under conditions appropriate for introduction of the recombinant poliovirus nucleic acid into the cell, thereby generating a modified cell which expresses a foreign gene product encoded by the foreign nucleotide sequence.

50. The method of claim 49 wherein the recombinant poliovirus nucleic acid is encapsidated.

51. The method of claim 49 wherein the cell is in a subject.

52. The method of claim 51 wherein the cell is contacted ex vivo and the modified cell is then reintroduced into the subject.

53. The method of claim 49 wherein the cell is selected from the group consisting of a peripheral blood mononuclear cell, a B cell, a T cell, a monocyte, a macrophage, a cutaneous cell, a muscle cell, a kidney cell, a mucosal cell, and a tumor cell.

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54. The method of claim 52 wherein the cell is reintroduced into the subject by injection or implantation.

55. The method of claim 49 wherein the foreign gene encodes a gene product selected from the group consisting of a protein or fragment thereof, an antisense gene, and a ribozyme.

56. The method of claim 55 wherein the protein is a therapeutic protein.

57. The method of claim 55 wherein the protein or fragment thereof is selected from the group consisting of a secretory protein, a cell surface protein, and a structural protein.

58. The method of claim 56 wherein the secretory protein is selected from the group consisting of an interleukin, a cytokine, and a factor.

59. The method of claim 58 wherein the interleukin is selected from the group consisting of IL-1, IL-2, and IL-6.

60. The method of claim 58 wherein the cytokine is selected from the group consisting of GM-CSF, and interferon- $\gamma$ .

61. The method of claim 55 wherein the antisense gene corresponds to a gene selected from the group consisting of a viral gene and an oncogene.

62. The method of claim 60 wherein the viral gene is an HIV gene.

63. The method of claim 55 wherein the ribozyme comprises an activity selected from the group consisting of endonuclease activity and polymerase activity.